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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/489,144	01/21/2000	Nan-Xing Hu	D/99136	5415

7590

02/26/2002

John E. Beck
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EXAMINER

GARRETT, DAWN L

ART UNIT	PAPER NUMBER
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1774

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DATE MAILED: 02/26/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-7

Office Action Summary

Application No.

09/489,144

Applicant(s)

HU ET AL.

Examiner

Dawn Garrett

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 and 25-43 is/are pending in the application.
- 4a) Of the above claim(s) 38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19, 25-37 and 39-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Response to Amendment

1. This Office action is in response to the amendment dated December 10, 2001. Claims 1, 12, 29, 30, 31, 35, 36, and 37 were amended and claims 20-24 were cancelled. Claim 38 is withdrawn as non-elected. Currently, claims 1-19, 25-37, and 39-43 are under consideration.
2. The marked-up copy of amendments indicates claim 33 was cancelled, but the official, entered copy has not cancelled claim 33. Currently, claim 33 is pending. Clarification regarding the intended status of claim 33 is respectfully requested.
3. The rejections of claims 12 and 36 under 35 USC 112, second paragraph, as set forth in paper no. 5, paragraphs 4 and 5, are withdrawn.
4. The rejection of claims 29, 30, 36, and 37 under 35 USC 112, second paragraph, as set forth in paper no. 5, paragraph 6, is maintained.
5. The rejection of claims 1-9, 20, 21, 27, 28, 31-35, and 39-41 under 35 USC 102(b) as being anticipated by Bosch is withdrawn due to the amendment.
6. The rejection of claims 10-19, 25, 26, 42, and 43 under 35 USC 102(b) as being anticipated by Bosch is maintained.
7. The rejection of claims 29, 30, 36, and 37 under 35 USC 103(a) as being unpatentable over Bosch is withdrawn.
8. The rejection of claims 22-24 under 35 USC 103(a) as being unpatentable over Bosch in view of Mori is withdrawn due to the cancellation of claims 22-24.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. Claims 29, 30, 36, and 37 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Although the written description provides for layers of 90nm in thickness within the disclosed ranges, the written description fails to describe "90 nm" as a specific endpoint for the thickness range of the anode, buffer, and hole transport layers.

Claim Rejections - 35 USC § 103

11. Claims 1-9 and 27- 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bosch in view of Mori for the reasons stated in paper no. 5, paragraph 11. With regard to the thickness of the layers it would have been obvious to one of ordinary skill in the art to have determined a thickness with a reasonable expectation of success, because it is not inventive to discover the optimum or workable ranges by routine experimentation.

Response to Arguments

12. Applicant's arguments filed December 10, 2001 have been fully considered but they are not persuasive. Applicant states at the top of page 8 that claims 7 and 16 have been amended. The examiner respectfully notes individual claims 7 and 16 have

not been amended. Claim 7 is now rejected under 35 USC 103(a) due to the amendment of independent claim 1. Claim 10, upon which claim 16 depends, has not been amended.

Applicant argues Bosch does not disclose a buffer layer in combination with the triazine compound of claim 10. The examiner notes the buffer layer is optional in the device of claim 10.

With regard to applicant's arguments over claims 27, 28, 32, and 33, the examiner maintains Bosch teaches an anode comprised of ITO and a cathode comprised of aluminum (pages 7 and 8) as required by instant claims 27, 28, 32, and 33.

The examiner maintains Bosch teaches the triazine formula (see page 3 through 6) selected by applicants as their ultimate species as an electron conducting layer. Furthermore, tertiary aromatic amine is taught per the instant buffer layer. Bosch alone or in combination with Mori teaches or renders obvious all components of the instant claims.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

~~§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).~~

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is (703)305-0788. The examiner can normally be reached from Monday through Friday from 9:00 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on (703)-308-0449. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9310 for regular communications and (703)872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-2351.

CYNTHIA H. KELLY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

D.G.
February 22, 2002

